

Title (en)  
HIGH EXPRESSION mRNA SWITCH

Title (de)  
HOCHSPEZIFISCHER MRNA-SCHALTER

Title (fr)  
COMMUTATEUR D'ARNm À EXPRESSION ÉLEVÉE

Publication  
**EP 3653710 A4 20210414 (EN)**

Application  
**EP 18832053 A 20180712**

Priority  
• JP 2017136469 A 20170712  
• JP 2018026362 W 20180712

Abstract (en)  
[origin: EP3653710A1] The present invention provides an mRNA switch which has improved expression level and sensitivity. An mRNA comprising:  
(i) a nucleic acid sequence specifically recognized by a miRNA or protein; and (ii) a nucleic acid sequence corresponding to a coding region for a marker protein, wherein a nucleotide contained in the mRNA comprises N<sup>1</sup>-methyl pseudouridine.

IPC 8 full level  
**C12Q 1/6897** (2018.01); **A61K 31/7115** (2006.01); **C12N 15/113** (2010.01); **C12N 15/67** (2006.01)

CPC (source: EP US)  
**A61K 31/7115** (2013.01 - EP); **C12N 15/11** (2013.01 - US); **C12N 15/67** (2013.01 - EP); **C12Q 1/04** (2013.01 - EP US); **C12Q 1/68** (2013.01 - EP); **C12N 2310/141** (2013.01 - EP)

Citation (search report)  
• [A] WO 2017073600 A1 20170504 - UNIV KYOTO [JP]  
• [A] KEI ENDO ET AL: "High-resolution Identification and Separation of Living Cell Types by Multiple microRNA-responsive Synthetic mRNAs", SCIENTIFIC REPORTS, vol. 6, no. 21991, 1 April 2016 (2016-04-01), pages 1 - 8, XP055379535, DOI: 10.1038/srep21991  
• [A] KENJI MIKI ET AL: "Efficient Detection and Purification of Cell Populations Using Synthetic MicroRNA Switches", CELL STEM CELL, vol. 16, no. 6, 1 June 2015 (2015-06-01), AMSTERDAM, NL, pages 699 - 711, XP055225629, ISSN: 1934-5909, DOI: 10.1016/j.stem.2015.04.005  
• [A] KAWASAKI SHUNSUKE ET AL: "Synthetic mRNA devices that detect endogenous proteins and distinguish mammalian cells", NUCLEIC ACIDS RESEARCH, vol. 45, no. 12, 19 May 2017 (2017-05-19), GB, pages e117 - e117, XP055781849, ISSN: 0305-1048, DOI: 10.1093/nar/gkx298  
• See references of WO 2019013294A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**EP 3653710 A1 20200520; EP 3653710 A4 20210414**; JP 7318931 B2 20230801; JP WO2019013294 A1 20201022;  
US 2021079440 A1 20210318; WO 2019013294 A1 20190117

DOCDB simple family (application)  
**EP 18832053 A 20180712**; JP 2018026362 W 20180712; JP 2019529788 A 20180712; US 201816629636 A 20180712